

Amendments to the Claims:

Claims 1-6 (Cancelled)

Claim 7 (Currently amended): A system for supplying air and controlling the flow of air into and out of the chambers of a patient-supporting low air loss air mattress, the system comprising:

a controllable blower having an intake port and an exhaust port;
air supply lines leading to the chambers of an air mattress;
pressure sensors operatively connected to the air supply lines; and
a three-port, two-position gate member selectively directing air from the blower exhaust port to the chambers of the air mattress or routing the flow of air from the air mattress into the blower intake port, the gate member being operable from, and limited to, one of two positions by which the flow of air is selectively diverted, a first position in which air is permitted to flow from the blower exhaust port to the chambers of the air mattress, and a second position in which the flow of air is routed from the air mattress into the blower intake port, the system being adapted to effect substantial and rapid evacuation of air from the air mattress when the gate member is in the second position, an amount of air flow being controllable from within the air supply lines.

Claim 8 (Previously presented): The system as recited in Claim 7, wherein the air supply lines have electrically controlled valves for controlling the amount of air that can flow therethrough.

Claim 9 (Previously presented): The system as recited in claim 8, wherein the air supply lines have the pressure sensors interposed between the valves and the chambers of the air mattress for sensing the air pressure in the chambers of the air mattress.

Claim 10 (Currently amended): The system as recited in Claim 7, wherein the means for directing air comprises a ~~multiple~~ two-position rotary valve.

Claim 11 (Previously presented): The system as recited in claim 10, wherein the rotary valve includes a housing defining an outlet port, an inlet port, and air mattress supply ports.

Claim 12 (Previously presented): The system as recited in claim 11, wherein the housing inlet port communicates with the blower exhaust port, the air mattress supply ports communicate with the air supply lines leading to the chambers of the mattress, and the housing outlet port communicates with the blower intake port.

Claim 13 (Currently amended): The system as recited in claim 10, wherein the ~~rotary valve has a~~ gate member is rotatably received by the a housing of the rotary valve in [a] the first or second position, the housing defining an outlet port, an inlet port, and air mattress supply ports.

Claim 14 (Previously presented): The system as recited in claim 13, wherein the gate member has one or more ports able to align with the valve housing inlet port when the gate member rotates in the first position, thereby allowing the gate member to communicate with the valve housing inlet port and air mattress supply ports, the blower intake to communicate with the outside environment, and the blower exhaust with the air mattress supply ports.

Claim 15 (Currently amended): The system as recited in claim ~~10~~ 13, wherein the gate member has one or more ports able to align with the valve housing outlet port when the gate member rotates in the second position, thereby allowing the gate member to communicate with the valve housing inlet port and the air mattress supply ports, the blower exhaust to communicate with the outside environment, and the blower intake with the air mattress supply ports.

Claim 16 (Currently amended): The system as recited in Claim [7] 8, further comprising a programmable control unit connected to the blower, the pressure sensors, and the valves.

Claim 17 (Previously presented): The system as recited in claim 16, wherein the control unit receives pressure signals from the pressure sensors and transmits a signal to incrementally close the valve in the air supply line having an air pressure above the predetermined range of pressures.

Claim 18 (Currently amended): The system as recited in claim [17] 16, wherein the control unit receives pressure signals from the pressure sensors and transmit a signal to incrementally open

the valve in the air supply line having an air pressure below the predetermined range of pressures.

Claim 19 (Previously presented): The system as recited in claim 18, wherein the control unit is able to transmit a signal to incrementally increase the supply of electrical power to the blower motor to increase the blower output if pressure in an air supply line is below a selected range of pressures and the valve in that line is completely open.

Claim 20 (Previously presented): The system as recited in claim 19, the control unit is able to receive inputs for the height and weight of the patient, determine acceptable air mattress supply line back pressures corresponding to patient and mattress interface pressures given input values for patient weight and height, whereby the values may be controlled to maintain patient and mattress interface pressures that are below pre-determined values.

Claim 21 (Currently amended): A method for inflating and deflating a patient support air mattress, the method comprising providing a blower producing air flow in pneumatic communication with the internal chamber of an air mattress, the blower including an inlet and an outlet; inflating the mattress by directing the flow of air to the mattress through a single inflation port of a valve housing in an inflation direction from the blower outlet; and deflating the mattress in a substantial and rapid manner by directing the flow of air from the mattress through a single deflation port of [a] the valve housing in a deflation direction to the blower inlet, adapting the valve to operate from two positions for alignment with the single inflation port and the single deflation port respectively for controlling the flow of air to and from the mattress.

Claim 22 (Canceled)

Claim 23 (Currently amended): The method according to claim [22] 21 wherein redirecting the flow of air with [a] the multi two-position valve comprises removing the blower outlet from pneumatic communication with the air mattress internal chamber and placing the blower inlet in pneumatic communication with the air mattress internal chamber.

Claim 24 (Previously presented): The method according to claim 23 wherein directing the flow of air in an inflation direction comprises placing the blower outlet in pneumatic communication with the air mattress internal chamber, and directing the flow of air in a deflation direction comprises placing the blower inlet in pneumatic communication with the air mattress internal chamber for rapid deflation.

Claims 25- 30 (Canceled)

Claim 31 (Currently amended): An inflatable patient support apparatus comprising:

- an inflatable mattress including an internal chamber,
- an air transmission device operable to provide air flow into and out of the internal chamber, and
- a three port valve controlling the air flow to inflate or deflate the mattress with the transmission device, the valve comprising a rotary valve, the valve being operable from, and limited to, one of two positions by which the flow of air is selectively diverted, a first position in which air is permitted to flow from the air transmission device to the internal chamber of the mattress, and a second position in which the flow of air is routed from the mattress into the air transmission device, the valve being adapted to effect substantial and rapid evacuation of air from the mattress when the valve is in the second position, an amount of air flow being controllable from within the air supply lines.

Claim 32 (Cancelled)

Claim 33 (Currently amended): The apparatus according to claim [32] 31 wherein the air transmission device comprises a blower.

Claim 34 (Previously presented): The apparatus according to claim 33 wherein the blower comprises a single direction blower.

Claim 35 (Previously presented): The apparatus according to claim 31 further comprising a control unit, a plurality of sensors, and a plurality of pressure control valves, the mattress including a plurality of internal chambers, the pressure sensors providing pressure indication

from the internal chambers to the control unit, and the control unit opening or closing the valves to change pressure inside the internal chambers.

Claim 36 (Previously presented): The apparatus according to claim 31 wherein the multi-port valve is manually operated.

Claim 37 (Withdrawn):